



State of Utah

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Department of
Environmental Quality

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DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

EW
5-16-2013
FILE COPY

MAY 14 2013

**CERTIFIED MAIL
(Return Receipt Requested)**

Shannon J. Storrud
Hexcel Corporation
P.O. Box 18748
Salt Lake City, Utah 84118-0748



Dear Mr. Storrud,

Subject: UPDES Permit No. UT0025305, Hexcel Corporation

Enclosed is UPDES Permit No. UT0025305 for your facility. Copies of EPA form 3320-1, Discharge Monitoring Report (DMR) forms, for reporting and self-monitoring requirements as specified in the permit, will be sent as soon as printed. This permit will become effective on **June 1, 2013**, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Section R317-9.

A fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request at the direction of the Legislature and in accordance with *Utah Code Annotated* 19-1-201. The fee schedule, as approved by the Legislature, includes a prescribed fee for the Minor Organic Chemicals Manufacturing Category that will be collected annually. The invoice for the prescribed annual fee for your facility will be sent in the near future.

As the State agency charged with the administration of UPDES Permits, we are continuously looking for ways to improve our quality of service to you. In an effort to improve the UPDES permitting process we are asking for your input. Since our customer base is limited, your input is important. Please take a few moments to complete an online survey at www.waterquality.utah.gov (click the "Give Feedback to DWQ" button on the left side of page). The results will be used to improve our quality and responsiveness to our permittees and give us feed back on customer satisfaction. We will address the issues you have identified on an ongoing basis.

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If you have any questions with regard to this matter, please contact Kim Shelley at (801) 536-4385 or kshelley@utah.gov.

Sincerely,



John Kennington, P.E. Manager
UPDES Engineering Section

JK:KS:mc

Enclosures (4):

1. Fact Sheet Statement of Basis, (DWQ-2013-003200)
2. Wasteload Analysis, (DWQ-2013-003202)
3. DMR Data, (DWQ-2013-003199)
4. Permit, (DWQ-2013-003201)

cc: Amy Clark, EPA Region VIII
Royal Delegee, Salt Lake Valley Public Health Department
Stacy Carroll, DWQ Accounts (w/o encl)

DWQ-2013-003203

**FACT SHEET/STATEMENT OF BASIS
HEXCEL CORPORATION
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT0025305
MINOR MUNICIPAL**

FACILITY CONTACTS

Person Name: Gene Barton	Person Name: Shannon Storrud
Position: Central Site Manager	Position: Environmental Engineer
Telephone: 801-508-8155	Telephone: 801-508-8011
Facility Name: Hexcel Corporation	
Mailing Address: P. O. Box 18748	
	Salt Lake City, Utah 84118-0748
Telephone: 801-508-8000	
Actual Address: 6800 West 5400 South	

DESCRIPTION OF FACILITY

Hexcel manufactures carbon fibers, epoxy resins, uni-directional carbon graphite cloth and woven carbon graphite fiber epoxy resin impregnated cloth ("pre-preg"). The following Standard Industrial Classification (SIC) codes apply: 2824 Manmade Organic Fibers-Except Cellulosic; 2821 Plastics Materials, Synthetic Resins, and Non-vulcanizable Elastomers.

There are 12 fiber lines, several pre-preg lines, and several uni-directional cloth lines. The process of manufacturing carbon fiber begins with spools of polyacrylonitrile (PAN). PAN is strung through a series of ovens and rollers. The fiber is then washed and cooled in an ammonium bicarbonate bath and rinsed in water. Drag-out of the carbon fiber from the ammonia bicarbonate bath is a source for ammonia in the rinse water. The rinse water is constantly being filled and overflow goes to the permitted outfall. The clean fiber then goes through a sizing process. Sizing is an aqueous solution of resin that the fiber is dipped in and then dried before it is spooled and packaged for shipping. If there is any waste of the sizing solution, it goes to the sanitary sewer (Central Valley). The waste from the ammonium bicarbonate bath also goes to the sewer. There is no wastewater generated in the production of epoxy resin, uni-directional cloth, or pre-preg.

The wastewater discharged at Outfall 001 consists of carbon fiber rinse water, reverse osmosis reject water, pump sealing cooling water, cooling tower blow down, steam condensate and non-contact cooling water. These waters are collected at the point of generation and then flow via an underground pipeline to the West Ridge Golf Course (WRGC) Pond or the Utah and Salt Lake Canal. Hexcel has demonstrated that the effluent can meet the effluent permit limits without treatment, therefore, there are no treatment units within the system.

Storm water from Hexcel property flows north in a ditch onto ATK property until it is piped under a rocky/pit run base for railroad tracks that cross over ATK property. Once the storm water goes under the railroad tracks it disperses over the predominately undeveloped property and percolates into the ground.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

The last renewal permit for Hexcel Corporation specified the receiving stream as the West Ridge Golf Course (WRGC) Pond. This is a private pond used to irrigate the WRGC.

After a site visit was conducted by Division of Water Quality Staff in September 2009, it was observed that Hexcel's effluent discharges either directly to the WRGC Pond or to the Utah and Salt Lake Canal depending on the volume of the WRGC Pond. It was also observed that excess water in the WRGC Pond may be discharged to the Utah and Salt Lake Canal.

Given the fact that the WRGC Pond is a private pond and the fact that Hexcel can discharge to the Utah and Salt Lake Canal either directly or once the effluent has co-mingled with water in the pond, the Division of Water Quality made the determination that the appropriate receiving water is the Utah and Salt Lake Canal and not the WRGC. The permit was modified to reflect this change on April 1, 2010.

The receiving water, Utah and Salt Lake Canal, is designated as a Class 4 which does not have an ammonia water quality standard associated with it. Therefore, the requirement in the previous permit to monitor ammonia quarterly was not included in the renewal permit.

DISCHARGE

DESCRIPTION OF DISCHARGE

Hexcel has one discharge point, Outfall 001, that is located at Latitude 40° 39' 17.65" and Longitude 112° 02' 42.85" along the north-east boundary of Hexcel's property at approximately 5400 South and 6500 West in Salt Lake County. The effluent passes through a vault just prior to crossing Hexcel's property line on the northeast boundary. There is a V-notch weir located in the vault where flow is measured and samples are collected.

Hexcel has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 5 years of data is attached. In the past 5 years, Hexcel has had three violations of the BOD₅ 30-day average effluent limit and two violations of the BOD₅ daily max effluent limit.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at Latitude 40°39' 17.65" and Longitude 112° 02' 42.85". The discharge is located approximately 5400 South and 6500 West in Salt Lake County, Utah.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge is to the Utah and Salt Lake Canal which is classified as 4, *Utah administrative Code (UAC) R317-2-13*.

Class 4	-Protected for agricultural uses including irrigation of crops and stock watering.
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BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD₅), and pH are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The limitation on Total Dissolved Solids (TDS) is based upon Water Quality Standards and is the same as in the previous permit. The permit limitations are:

Parameter	Effluent Limitations a/			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	0.6	NA	NA	NA
BOD ₅ , mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
Total Dissolved Solids, mg/L	NA	NA	NA	1,200
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

a/ See Definitions, *Part V*, of Permit for definition of terms.

SELF-MONITORING AND REPORTING REQUIREMENTS

The permit requires reports to be submitted monthly on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period.

Self-Monitoring and Reporting Requirements ^a			
Parameter	Frequency	Sample Type	Units
Total Flow	Monthly	Instantaneous Measurement	MGD
BOD ₅	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
Total Dissolved Solids	Monthly	Grab	mg/L
pH	Monthly	Grab	SU

NA – Not Applicable

a/ See Definitions, *Part V*, of Permit for definition of terms.

STORM WATER

Storm water that drains from the Hexcel property percolates into the ground in a sparsely developed area on ATK property, north of Hexcel. The risk of storm water from Hexcel reaching surface waters after flowing over this area is very unlikely.

Since there has not been a known discharge of storm water from the facility to surface waters during the last three permit cycles, no storm water permit conditions will be required at this time. However, a storm water reopener provision will be included in the permit.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317-2-7.2.*

The permittee is a minor industrial facility that discharges to either a private golf course pond or to a Class 4 water body. The receiving stream water quality monitoring data indicate no impairment of the stream and the receiving water body is not a fishery. Therefore, no WET limits and no toxicity testing requirements are included in this renewal permit. The permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the effluent during this permit cycle.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Kim Shelley
Utah Division of Water Quality

PUBLIC NOTICE

Began: March 29, 2013

Ended: April 29, 2013

Public Noticed in the Salt Lake Tribune and Deseret News.

No comments were received during the public comment period. Therefore, the permit and FSSOB are the same as the draft documents that were public noticed.

April 30, 2013

WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis
SUMMARY

Discharging Facility: Hexcel
UPDES No: UT-0025305
Current Flow: 0.60 MGD **Design Flow**
Design Flow 0.60 MGD

Receiving Water: Utah Salt Lake Canal
Stream Classification: 2B, 4
Stream Flows [cfs]:
0.0 Summer (July-Sept) 20th Percentile
0.0 Fall (Oct-Dec) 20th Percentile
0.0 Winter (Jan-Mar) 20th Percentile
0.0 Spring (Apr-June) 20th Percentile
0.0 Average
Stream TDS Values:
700.0 Summer (July-Sept) Mean
700.0 Fall (Oct-Dec) Mean
700.0 Winter (Jan-Mar) Mean
700.0 Spring (Apr-June) Mean

Effluent Limits:		WQ Standard:	
Flow, MGD:	0.60 MGD	Design Flow	
BOD, mg/l:	25.0 Summer	5.0 Indicator	
Dissolved Oxygen, mg/l	NA Summer	5.0 30 Day Average	
TNH3, Chronic, mg/l:	NA Summer	Varies Function of pH and Temperature	
TDS, mg/l:	1205.4 Summer	1200.0	

Modeling Parameters:
Acute River Width: 50.0%
Chronic River Width: 100.0%

Level 1 Antidegradation Level Completed: Level II Review not required

Date: 2/25/2013

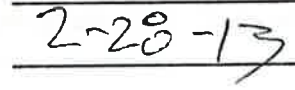
Permit Writer:

WLA by:

WQM Sec. Approval:

TMDL Sec. Approval:





**Utah Division of Water Quality
Salt Lake City, Utah**

**WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis**

25-Feb-13
4:00 PM

Facilities: Hexcel
Discharging to: Utah Salt Lake Canal

UPDES No: UT-0025305

I. Introduction

Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses [R317-2-8, UAC]. Projected concentrations are compared to numeric water quality standards to determine acceptability. The anti-degradation policy and procedures are also considered. The primary in-stream parameters of concern may include metals (as a function of hardness), total dissolved solids (TDS), total residual chlorine (TRC), un-ionized ammonia (as a function of pH and temperature, measured and evaluated in terms of total ammonia), and dissolved oxygen.

Mathematical water quality modeling is employed to determine stream quality response to point source discharges. Models aid in the effort of anticipating stream quality at future effluent flows at critical environmental conditions (e.g., low stream flow, high temperature, high pH, etc).

The numeric criteria in this wasteload analysis may always be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

II. Receiving Water and Stream Classification

Utah Salt Lake Canal:	2B, 4
Antidegradation Review:	Antidegradation Level II Review is NOT Required

III. Numeric Stream Standards for Protection of Aquatic Wildlife

Total Ammonia (TNH ₃)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average) 0.019 mg/l (1 Hour Average)
Chronic Dissolved Oxygen (DO)	5.00 mg/l (30 Day Average) N/A mg/l (7Day Average) 3.00 mg/l (1 Day Average)
Maximum Total Dissolved Solids	1200.0 mg/l

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Salt Lake City, Utah**

Acute and Chronic Heavy Metals (Dissolved)

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aluminum	87.00 ug/l**	0.435 lbs/day	750.00	ug/l	3.752 lbs/day
Arsenic	190.00 ug/l	0.951 lbs/day	340.00	ug/l	1.701 lbs/day
Cadmium	0.61 ug/l	0.003 lbs/day	6.52	ug/l	0.033 lbs/day
Chromium III	211.92 ug/l	1.060 lbs/day	4433.71	ug/l	22.182 lbs/day
ChromiumVI	11.00 ug/l	0.055 lbs/day	16.00	ug/l	0.080 lbs/day
Copper	23.85 ug/l	0.119 lbs/day	39.41	ug/l	0.197 lbs/day
Iron			1000.00	ug/l	5.003 lbs/day
Lead	12.88 ug/l	0.064 lbs/day	330.60	ug/l	1.654 lbs/day
Mercury	0.0120 ug/l	0.000 lbs/day	2.40	ug/l	0.012 lbs/day
Nickel	132.13 ug/l	0.661 lbs/day	1188.44	ug/l	5.946 lbs/day
Selenium	4.60 ug/l	0.023 lbs/day	20.00	ug/l	0.100 lbs/day
Silver	N/A ug/l	N/A lbs/day	25.04	ug/l	0.125 lbs/day
Zinc	303.93 ug/l	1.521 lbs/day	303.93	ug/l	1.521 lbs/day

* Allowed below discharge

**Chronic Aluminum standard applies only to waters with a pH < 7.0 and a Hardness < 50 mg/l as CaCO3

Metals Standards Based upon a Hardness of 300 mg/l as CaCO3

Organics [Pesticides]

Parameter	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard		
	Concentration	Load*	Concentration		Load*
Aldrin			1.500	ug/l	0.008 lbs/day
Chlordane	0.004 ug/l	0.022 lbs/day	1.200	ug/l	0.006 lbs/day
DDT, DDE	0.001 ug/l	0.005 lbs/day	0.550	ug/l	0.003 lbs/day
Dieldrin	0.002 ug/l	0.010 lbs/day	1.250	ug/l	0.006 lbs/day
Endosulfan	0.056 ug/l	0.283 lbs/day	0.110	ug/l	0.001 lbs/day
Endrin	0.002 ug/l	0.012 lbs/day	0.090	ug/l	0.000 lbs/day
Guthion			0.010	ug/l	0.000 lbs/day
Heptachlor	0.004 ug/l	0.019 lbs/day	0.260	ug/l	0.001 lbs/day
Lindane	0.080 ug/l	0.405 lbs/day	1.000	ug/l	0.005 lbs/day
Methoxychlor			0.030	ug/l	0.000 lbs/day
Mirex			0.010	ug/l	0.000 lbs/day
Parathion			0.040	ug/l	0.000 lbs/day
PCB's	0.014 ug/l	0.071 lbs/day	2.000	ug/l	0.010 lbs/day
Pentachlorophenol	13.00 ug/l	65.740 lbs/day	20.000	ug/l	0.100 lbs/day
Toxephene	0.0002 ug/l	0.001 lbs/day	0.7300	ug/l	0.004 lbs/day

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Salt Lake City, Utah**

IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			1200.0 mg/l	3.00 tons/day

V. Numeric Stream Standards for Protection of Human Health (Class 1C Waters)

Metals	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	Load*	Concentration	Load*
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3)			ug/l	lbs/day
to			ug/l	lbs/day
Nitrates as N			ug/l	lbs/day

Chlorophenoxy Herbicides

2,4-D	ug/l	lbs/day
2,4,5-TP	ug/l	lbs/day
Endrin	ug/l	lbs/day
ocyclohexane (Lindane)	ug/l	lbs/day
Methoxychlor	ug/l	lbs/day
Toxaphene	ug/l	lbs/day

VI. Numeric Stream Standards the Protection of Human Health from Water & Fish Consumption [Toxics]

Toxic Organics	Maximum Conc., ug/l - Acute Standards			
	Class 1C		Class 3A, 3B	
	[2 Liters/Day for 70 Kg Person over 70 Yr.]		[6.5 g for 70 Kg Person over 70 Yr.]	
Acenaphthene	ug/l	lbs/day	ug/l	lbs/day
Acrolein	ug/l	lbs/day	ug/l	lbs/day
Acrylonitrile	ug/l	lbs/day	ug/l	lbs/day
Benzene	ug/l	lbs/day	ug/l	lbs/day
Benzidine	ug/l	lbs/day	ug/l	lbs/day
Carbon tetrachloride	ug/l	lbs/day	ug/l	lbs/day
Chlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichloroethane	ug/l	lbs/day	ug/l	lbs/day

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1,1,1-Trichloroethane				
Hexachloroethane	ug/l	lbs/day	ug/l	lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	ug/l	lbs/day	ug/l	lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day	ug/l	lbs/day
Chloroethane			ug/l	lbs/day
Bis(2-chloroethyl) ether	ug/l	lbs/day	ug/l	lbs/day
2-Chloroethyl vinyl ether	ug/l	lbs/day	ug/l	lbs/day
2-Chloronaphthalene	ug/l	lbs/day	ug/l	lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day	ug/l	lbs/day
p-Chloro-m-cresol			ug/l	lbs/day
Chloroform (HM)	ug/l	lbs/day	ug/l	lbs/day
2-Chlorophenol	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
1,4-Dichlorobenzene	ug/l	lbs/day	ug/l	lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day	ug/l	lbs/day
1,1-Dichloroethylene	ug/l	lbs/day	ug/l	lbs/day
1,2-trans-Dichloroethylene	ug/l	lbs/day	ug/l	lbs/day
2,4-Dichlorophenol	ug/l	lbs/day	ug/l	lbs/day
1,2-Dichloropropane	ug/l	lbs/day	ug/l	lbs/day
1,3-Dichloropropylene	ug/l	lbs/day	ug/l	lbs/day
2,4-Dimethylphenol	ug/l	lbs/day	ug/l	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	ug/l	lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	ug/l	lbs/day
1,2-Diphenylhydrazine	ug/l	lbs/day	ug/l	lbs/day
Ethylbenzene	ug/l	lbs/day	ug/l	lbs/day
Fluoranthene	ug/l	lbs/day	ug/l	lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) ether	ug/l	lbs/day	ug/l	lbs/day
Bis(2-chloroethoxy) methane	ug/l	lbs/day	ug/l	lbs/day
Methylene chloride (HM)	ug/l	lbs/day	ug/l	lbs/day
Methyl chloride (HM)	ug/l	lbs/day	ug/l	lbs/day
Methyl bromide (HM)	ug/l	lbs/day	ug/l	lbs/day
Bromoform (HM)	ug/l	lbs/day	ug/l	lbs/day
Dichlorobromomethane	ug/l	lbs/day	ug/l	lbs/day
Chlorodibromomethane	ug/l	lbs/day	ug/l	lbs/day
Hexachlorobutadiene(c)	ug/l	lbs/day	ug/l	lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day	ug/l	lbs/day
Isophorone	ug/l	lbs/day	ug/l	lbs/day
Naphthalene				
Nitrobenzene	ug/l	lbs/day	ug/l	lbs/day
2-Nitrophenol	ug/l	lbs/day	ug/l	lbs/day
4-Nitrophenol	ug/l	lbs/day	ug/l	lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	ug/l	lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day	ug/l	lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day	ug/l	lbs/day
Pentachlorophenol	ug/l	lbs/day	ug/l	lbs/day

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Phenol	ug/l	lbs/day	ug/l	lbs/day
Bis(2-ethylhexyl)phthalate	ug/l	lbs/day	ug/l	lbs/day
Butyl benzyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Di-n-butyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Di-n-octyl phthalate				
Diethyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Dimethyl phthalate	ug/l	lbs/day	ug/l	lbs/day
Benzo(a)anthracene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Benzo(b)fluoranthene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Benzo(k)fluoranthene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Chrysene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Dibenzo(a,h)anthracene	ug/l	lbs/day	ug/l	lbs/day
Indeno(1,2,3-cd)pyrene	ug/l	lbs/day	ug/l	lbs/day
Pyrene (PAH)	ug/l	lbs/day	ug/l	lbs/day
Tetrachloroethylene	ug/l	lbs/day	ug/l	lbs/day
Toluene	ug/l	lbs/day	ug/l	lbs/day
Trichloroethylene	ug/l	lbs/day	ug/l	lbs/day
Vinyl chloride	ug/l	lbs/day	ug/l	lbs/day
Pesticides				
Aldrin	ug/l	lbs/day	ug/l	lbs/day
Dieldrin	ug/l	lbs/day	ug/l	lbs/day
Chlordane	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDT	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDE	ug/l	lbs/day	ug/l	lbs/day
4,4'-DDD	ug/l	lbs/day	ug/l	lbs/day
alpha-Endosulfan	ug/l	lbs/day	ug/l	lbs/day
beta-Endosulfan	ug/l	lbs/day	ug/l	lbs/day
Endosulfan sulfate	ug/l	lbs/day	ug/l	lbs/day
Endrin	ug/l	lbs/day	ug/l	lbs/day
Endrin aldehyde	ug/l	lbs/day	ug/l	lbs/day
Heptachlor	ug/l	lbs/day	ug/l	lbs/day
Heptachlor epoxide				
PCB's				
PCB 1242 (Arochlor 1242)	ug/l	lbs/day	ug/l	lbs/day
PCB-1254 (Arochlor 1254)	ug/l	lbs/day	ug/l	lbs/day
PCB-1221 (Arochlor 1221)	ug/l	lbs/day	ug/l	lbs/day
PCB-1232 (Arochlor 1232)	ug/l	lbs/day	ug/l	lbs/day
PCB-1248 (Arochlor 1248)	ug/l	lbs/day	ug/l	lbs/day
PCB-1260 (Arochlor 1260)	ug/l	lbs/day	ug/l	lbs/day
PCB-1016 (Arochlor 1016)	ug/l	lbs/day	ug/l	lbs/day
Pesticide				
Toxaphene	ug/l		ug/l	lbs/day
Dioxin				
Dioxin (2,3,7,8-TCDD)	ug/l	lbs/day		

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Metals

Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	ug/l	lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	ug/l	lbs/day
Lead	ug/l	lbs/day		
Mercury			ug/l	lbs/day
Nickel			ug/l	lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			ug/l	lbs/day
Zinc				

There are additional standards that apply to this receiving water, but were not considered in this modeling/waste load allocation analysis.

VII. Mathematical Modeling of Stream Quality

Model configuration was accomplished utilizing standard modeling procedures. Data points were plotted and coefficients adjusted as required to match observed data as closely as possible.

The modeling approach used in this analysis included one or a combination of the following models.

- (1) The Utah River Model, Utah Division of Water Quality, 1992. Based upon STREAMDO IV (Region VIII) and Supplemental Ammonia Toxicity Models; EPA Region VIII, Sept. 1990 and QUAL2E (EPA, Athens, GA).
- (2) Utah Ammonia/Chlorine Model, Utah Division of Water Quality, 1992.
- (3) AMMTOX Model, University of Colorado, Center of Limnology, and EPA Region 8
- (4) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al. Harper Collins Publisher, Inc. 1987, pp. 644.

Coefficients used in the model were based, in part, upon the following references:

- (1) Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens Georgia. EPA/600/3-85/040 June 1985.

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(2) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al.
Harper Collins Publisher, Inc. 1987, pp. 644.

VIII. Modeling Information

The required information for the model may include the following information for both the upstream conditions at low flow and the effluent conditions:

Flow, Q, (cfs or MGD)	D.O. mg/l
Temperature, Deg. C.	Total Residual Chlorine (TRC), mg/l
pH	Total NH3-N, mg/l
BOD5, mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

Other Conditions

In addition to the upstream and effluent conditions, the models require a variety of physical and biological coefficients and other technical information. In the process of actually establishing the permit limits for an effluent, values are used based upon the available data, model calibration, literature values, site visits and best professional judgement.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis. Dry washes are considered to have an upstream flow equal to the flow of the discharge.

Current Upstream Information

	Stream		pH	T-NH3 mg/l as N	BOD5 mg/l	DO mg/l	TRC mg/l	TDS mg/l
	Flow cfs	Temp. Deg. C						
Summer (Irrig. Season)	0.0	20.0	8.2	0.10	0.50	12.48	0.00	700.0
Fall	0.0	12.0	8.1	0.10	0.50	---	0.00	700.0
Winter	0.0	4.0	8.0	0.10	0.50	---	0.00	700.0
Spring	0.0	12.0	8.1	0.10	0.50	---	0.00	700.0
Dissolved Metals	Al ug/l	As ug/l	Cd ug/l	CrIII ug/l	CrVI ug/l	Copper ug/l	Fe ug/l	Pb ug/l
All Seasons	1.59*	0.53*	0.053*	0.53*	2.65*	0.53*	0.83*	0.53*
Dissolved Metals	Hg ug/l	Ni ug/l	Se ug/l	Ag ug/l	Zn ug/l	Boron ug/l	* 1/2 MDL	
All Seasons	0.0000	0.53*	1.06*	0.1*	0.053*	10.0		

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Projected Discharge Information

Season	Flow, MGD	Temp.	TDS mg/l	TDS tons/day
Summer	0.60000	NA	0.00	0.00000
Fall	0.60000	NA		
Winter	0.60000	NA		
Spring	0.60000	NA		

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

IX. Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

Other conditions used in the modeling effort coincide with the environmental conditions expected at low stream flows.

Effluent Limitation for Flow based upon Water Quality Standards

In-stream criteria of downstream segments will be met with an effluent flow maximum value as follows:

Season	Daily Average	
Summer	0.600 MGD	0.928 cfs
Fall	0.600 MGD	0.928 cfs
Winter	0.600 MGD	0.928 cfs
Spring	0.600 MGD	0.928 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.6 MGD. If the discharger is allowed to have a flow greater than 0.6 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occurring, the permit writers must include the discharge flow limitation as indicated above; or, include loading effluent limits in the permit.

Effluent Limitation for Whole Effluent Toxicity (WET) based upon WET Policy

Effluent Toxicity will not occur in downstream segments if the values below are met.

WET Requirements	LC50 >	EOP Effluent	[Acute]
	IC25 >	98.9% Effluent	[Chronic]

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Effluent Limitation for Biological Oxygen Demand (BOD) based upon Water Quality Standards or Regulations

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent BOD limitation as follows:

Season	Concentration	
Summer	25.0 mg/l as BOD5	125.1 lbs/day
Fall	25.0 mg/l as BOD5	125.1 lbs/day
Winter	25.0 mg/l as BOD5	125.1 lbs/day
Spring	25.0 mg/l as BOD5	125.1 lbs/day

Effluent Limitation for Dissolved Oxygen (DO) based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent D.O. limitation as follows:

Season	Concentration
Summer	NA
Fall	NA
Winter	NA
Spring	NA

Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

Season		Concentration		Load	
Summer	4 Day Avg. - Chronic	NA	mg/l as N	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l as N	NA	lbs/day
Fall	4 Day Avg. - Chronic	NA	mg/l as N	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l as N	NA	lbs/day
Winter	4 Day Avg. - Chronic	NA	mg/l as N	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l as N	NA	lbs/day
Spring	4 Day Avg. - Chronic	NA	mg/l as N	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l as N	NA	lbs/day

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100. %.

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Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards

In-stream criteria of downstream segments for Total Residual Chlorine will be met with an effluent limitation as follows:

Season		Concentration		Load	
Summer	4 Day Avg. - Chronic	NA	mg/l	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l	NA	lbs/day
Fall	4 Day Avg. - Chronic	NA	mg/l	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l	NA	lbs/day
Winter	4 Day Avg. - Chronic	NA	mg/l	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l	NA	lbs/day
Spring	4 Day Avg. - Chronic	NA	mg/l	NA	lbs/day
	1 Hour Avg. - Acute	NA	mg/l	NA	lbs/day

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season		Concentration		Load	
Summer	Maximum, Acute	1205.4	mg/l	3.02	tons/day
Fall	Maximum, Acute	1205.4	mg/l	3.02	tons/day
Winter	Maximum, Acute	1205.4	mg/l	3.02	tons/day
Spring	Maximum, Acute	1205.4	mg/l	3.02	tons/day

Colorado Salinity Forum Limits Determined by Permitting Section

Effluent Limitations for Total Recoverable Metals based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Metals will be met with an effluent limitation as follows (based upon a hardness of 300 mg/l):

	4 Day Average		Load	1 Hour Average		Load
	Concentration			Concentration		
Aluminum	N/A		N/A	758.1	ug/l	3.8 lbs/day
Arsenic	192.04	ug/l	0.6 lbs/day	343.7	ug/l	1.7 lbs/day
Cadmium	0.62	ug/l	0.0 lbs/day	6.6	ug/l	0.0 lbs/day
Chromium III	214.19	ug/l	0.7 lbs/day	4,481.5	ug/l	22.4 lbs/day
Chromium VI	11.08	ug/l	0.0 lbs/day	16.1	ug/l	0.1 lbs/day
Copper	24.10	ug/l	0.1 lbs/day	39.8	ug/l	0.2 lbs/day
Iron	N/A		N/A	1,010.8	ug/l	5.1 lbs/day
Lead	13.01	ug/l	0.0 lbs/day	334.2	ug/l	1.7 lbs/day
Mercury	0.01	ug/l	0.0 lbs/day	2.4	ug/l	0.0 lbs/day
Nickel	133.55	ug/l	0.4 lbs/day	1,201.2	ug/l	6.0 lbs/day
Selenium	4.63	ug/l	0.0 lbs/day	20.2	ug/l	0.1 lbs/day
Silver	N/A	ug/l	N/A lbs/day	25.3	ug/l	0.1 lbs/day

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Zinc	307.21 ug/l	1.0 lbs/day	307.2	ug/l	1.5 lbs/day
Cyanide	5.26 ug/l	0.0 lbs/day	22.2	ug/l	0.1 lbs/day

**Effluent Limitations for Heat/Temperature based upon
Water Quality Standards**

Summer	22.0 Deg. C.	71.6 Deg. F
Fall	14.0 Deg. C.	57.2 Deg. F
Winter	6.0 Deg. C.	42.8 Deg. F
Spring	14.0 Deg. C.	57.2 Deg. F

**Effluent Limitations for Organics [Pesticides]
Based upon Water Quality Standards**

In-stream criteria of downstream segments for Organics [Pesticides]
will be met with an effluent limit as follows:

	4 Day Average		1 Hour Average		
	Concentration	Load	Concentration		Load
Aldrin			1.5E+00	ug/l	1.16E-02 lbs/day
Chlordane	4.30E-03 ug/l	2.15E-02 lbs/day	1.2E+00	ug/l	9.29E-03 lbs/day
DDT, DDE	1.00E-03 ug/l	5.00E-03 lbs/day	5.5E-01	ug/l	4.26E-03 lbs/day
Dieldrin	1.90E-03 ug/l	9.51E-03 lbs/day	1.3E+00	ug/l	9.67E-03 lbs/day
Endosulfan	5.60E-02 ug/l	2.80E-01 lbs/day	1.1E-01	ug/l	8.51E-04 lbs/day
Endrin	2.30E-03 ug/l	1.15E-02 lbs/day	9.0E-02	ug/l	6.97E-04 lbs/day
Guthion	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	7.74E-05 lbs/day
Heptachlor	3.80E-03 ug/l	1.90E-02 lbs/day	2.6E-01	ug/l	2.01E-03 lbs/day
Lindane	8.00E-02 ug/l	4.00E-01 lbs/day	1.0E+00	ug/l	7.74E-03 lbs/day
Methoxychlor	0.00E+00 ug/l	0.00E+00 lbs/day	3.0E-02	ug/l	2.32E-04 lbs/day
Mirex	0.00E+00 ug/l	0.00E+00 lbs/day	1.0E-02	ug/l	7.74E-05 lbs/day
Parathion	0.00E+00 ug/l	0.00E+00 lbs/day	4.0E-02	ug/l	3.10E-04 lbs/day
PCB's	1.40E-02 ug/l	7.00E-02 lbs/day	2.0E+00	ug/l	1.55E-02 lbs/day
Pentachlorophenol	1.30E+01 ug/l	6.50E+01 lbs/day	2.0E+01	ug/l	1.55E-01 lbs/day
Toxephene	2.00E-04 ug/l	1.00E-03 lbs/day	7.3E-01	ug/l	5.65E-03 lbs/day

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**Effluent Targets for Pollution Indicators
Based upon Water Quality Standards**

In-stream criteria of downstream segments for Pollution Indicators will be met with an effluent limit as follows:

	1 Hour Average	
	Concentration	Loading
Gross Beta (pCi/l)	50.0 pCi/L	
BOD (mg/l)	5.0 mg/l	25.0 lbs/day
Nitrates as N	4.0 mg/l	20.0 lbs/day
Total Phosphorus as P	0.05 mg/l	0.3 lbs/day
Total Suspended Solids	90.0 mg/l	450.3 lbs/day

Note: Pollution indicator targets are for information purposes only.

**Effluent Limitations for Protection of Human Health [Toxics Rule]
Based upon Water Quality Standards (Most stringent of 1C or 3A & 3B as appropriate.)**

In-stream criteria of downstream segments for Protection of Human Health [Toxics] will be met with an effluent limit as follows:

	Maximum Concentration	
	Concentration	Load
Toxic Organics		
Acenaphthene	ug/l	lbs/day
Acrolein	ug/l	lbs/day
Acrylonitrile	ug/l	lbs/day
Benzene	ug/l	lbs/day
Benzidine	ug/l	lbs/day
Carbon tetrachloride	ug/l	lbs/day
Chlorobenzene	ug/l	lbs/day
1,2,4-Trichlorobenzene		
Hexachlorobenzene	ug/l	lbs/day
1,2-Dichloroethane	ug/l	lbs/day
1,1,1-Trichloroethane		
Hexachloroethane	ug/l	lbs/day
1,1-Dichloroethane		
1,1,2-Trichloroethane	ug/l	lbs/day
1,1,2,2-Tetrachloroethane	ug/l	lbs/day
Chloroethane		
Bis(2-chloroethyl) ether	ug/l	lbs/day
2-Chloroethyl vinyl ether		
2-Chloronaphthalene	ug/l	lbs/day
2,4,6-Trichlorophenol	ug/l	lbs/day
p-Chloro-m-cresol		
Chloroform (HM)	ug/l	lbs/day
2-Chlorophenol	ug/l	lbs/day
1,2-Dichlorobenzene	ug/l	lbs/day
1,3-Dichlorobenzene	ug/l	lbs/day

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1,4-Dichlorobenzene	ug/l	lbs/day
3,3'-Dichlorobenzidine	ug/l	lbs/day
1,1-Dichloroethylene	ug/l	lbs/day
1,2-trans-Dichloroethylene1		
2,4-Dichlorophenol	ug/l	lbs/day
1,2-Dichloropropane	ug/l	lbs/day
1,3-Dichloropropylene	ug/l	lbs/day
2,4-Dimethylphenol	ug/l	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day
2,6-Dinitrotoluene		
1,2-Diphenylhydrazine	ug/l	lbs/day
Ethylbenzene	ug/l	lbs/day
Fluoranthene	ug/l	lbs/day
4-Chlorophenyl phenyl ether		
4-Bromophenyl phenyl ether		
Bis(2-chloroisopropyl) ether	ug/l	lbs/day
Bis(2-chloroethoxy) methane		
Methylene chloride (HM)	ug/l	lbs/day
Methyl chloride (HM)		
Methyl bromide (HM)		
Bromoform (HM)	ug/l	lbs/day
Dichlorobromomethane(HM)	ug/l	lbs/day
Chlorodibromomethane (HM)	ug/l	lbs/day
Hexachlorocyclopentadiene	ug/l	lbs/day
Isophorone	ug/l	lbs/day
Naphthalene		
Nitrobenzene	ug/l	lbs/day
2-Nitrophenol		
4-Nitrophenol		
2,4-Dinitrophenol	ug/l	lbs/day
4,6-Dinitro-o-cresol	ug/l	lbs/day
N-Nitrosodimethylamine	ug/l	lbs/day
N-Nitrosodiphenylamine	ug/l	lbs/day
N-Nitrosodi-n-propylamine	ug/l	lbs/day
Pentachlorophenol	ug/l	lbs/day
Phenol	ug/l	lbs/day
Bis(2-ethylhexyl)phthalate	ug/l	lbs/day
Butyl benzyl phthalate	ug/l	lbs/day
Di-n-butyl phthalate	ug/l	lbs/day
Di-n-octyl phthlate		
Diethyl phthalate	ug/l	lbs/day
Dimethyl phthlate	ug/l	lbs/day
Benzo(a)anthracene (PAH)	ug/l	lbs/day
Benzo(a)pyrene (PAH)	ug/l	lbs/day
Benzo(b)fluoranthene (PAH)	ug/l	lbs/day
Benzo(k)fluoranthene (PAH)	ug/l	lbs/day
Chrysene (PAH)	ug/l	lbs/day
Acenaphthylene (PAH)		
Anthracene (PAH)		
Dibenzo(a,h)anthracene (PAH)	ug/l	lbs/day
indeno(1,2,3-cd)pyrene (PAH)	ug/l	lbs/day

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Pyrene (PAH)	ug/l	lbs/day
Tetrachloroethylene	ug/l	lbs/day
Toluene	ug/l	lbs/day
Trichloroethylene	ug/l	lbs/day
Vinyl chloride	ug/l	lbs/day
Pesticides		
Aldrin	ug/l	lbs/day
Dieldrin	ug/l	lbs/day
Chlordane	ug/l	lbs/day
4,4'-DDT	ug/l	lbs/day
4,4'-DDE	ug/l	lbs/day
4,4'-DDD	ug/l	lbs/day
alpha-Endosulfan	ug/l	lbs/day
beta-Endosulfan	ug/l	lbs/day
Endosulfan sulfate	ug/l	lbs/day
Endrin	ug/l	lbs/day
Endrin aldehyde	ug/l	lbs/day
Heptachlor	ug/l	lbs/day
Heptachlor epoxide		
PCB's		
PCB 1242 (Arochlor 1242)	ug/l	lbs/day
PCB-1254 (Arochlor 1254)	ug/l	lbs/day
PCB-1221 (Arochlor 1221)	ug/l	lbs/day
PCB-1232 (Arochlor 1232)	ug/l	lbs/day
PCB-1248 (Arochlor 1248)	ug/l	lbs/day
PCB-1260 (Arochlor 1260)	ug/l	lbs/day
PCB-1016 (Arochlor 1016)	ug/l	lbs/day
Pesticide		
Toxaphene	ug/l	lbs/day
Metals		
Antimony	ug/l	lbs/day
Arsenic	ug/l	lbs/day
Asbestos	ug/l	lbs/day
Beryllium		
Cadmium		
Chromium (III)		
Chromium (VI)		
Copper	ug/l	lbs/day
Cyanide	ug/l	lbs/day
Lead		
Mercury	ug/l	lbs/day
Nickel	ug/l	lbs/day
Selenium		
Silver		
Thallium	ug/l	lbs/day
Zinc		

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Dioxin

Dioxin (2,3,7,8-TCDD)

#N/A ug/l

#N/A lbs/day

**Metals Effluent Limitations for Protection of All Beneficial Uses
Based upon Water Quality Standards and Toxics Rule**

	Class 4 Acute Agricultural ug/l	Class 3 Acute Aquatic Wildlife ug/l	Acute Toxics Drinking Water Source ug/l	Acute Toxics Wildlife ug/l	1C Acute Health Criteria ug/l	Acute Most Stringent ug/l	Class 3 Chronic Aquatic Wildlife ug/l
Aluminum						0.0	N/A
Antimony				4346.3		4346.3	
Arsenic	101.1				0.0	101.1	
Barium						0.0	
Beryllium						0.0	
Cadmium	10.1				0.0	10.1	
Chromium (III)					0.0	0.0	
Chromium (VI)	101.1				0.0	101.07	
Copper	202.1					202.1	
Cyanide		22.2	222370.2			222370.2	5.3
Iron						0.0	
Lead	101.1				0.0	101.1	
Mercury				0.15	0.0	0.15	
Nickel				4649.6		4649.6	
Selenium	50.5				0.0	50.5	
Silver					0.0	0.0	
Thallium				6.4		6.4	
Zinc						0.0	
Boron	758.1					758.1	

Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]

[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l
Aluminum	0.0	N/A
Antimony	4346.33	
Arsenic	101.1	
Asbestos	0.00E+00	
Barium		
Beryllium		
Cadmium	10.1	Acute Controls
Chromium (III)	0.0	Acute Controls
Chromium (VI)	101.1	Acute Controls
Copper	202.1	Acute Controls

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Cyanide	222370.2	5.3	
Iron	0.0		
Lead	101.1		Acute Controls
Mercury	0.152		Acute Controls
Nickel	4649.6		Acute Controls
Selenium	50.5		Acute Controls
Silver	0.0	N/A	
Thallium	6.4		
Zinc	0.0		Acute Controls
Boron	758.08		

Other Effluent Limitations are based upon R317-1.

E. coli 126.0 organisms per 100 ml

X. Antidegradation Considerations

The Utah Antidegradation Policy allows for degradation of existing quality where it is determined that such lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are protected [R317-2-3]. It has been determined that certain chemical parameters introduced by this discharge will cause an increase of the concentration of said parameters in the receiving waters. Under no conditions will the increase in concentration be allowed to interfere with existing instream water uses.

The antidegradation rules and procedures allow for modification of effluent limits less than those based strictly upon mass balance equations utilizing 100% of the assimilative capacity of the receiving water. Additional factors include considerations for "Blue-ribbon" fisheries, special recreational areas, threatened and endangered species, and drinking water sources.

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an **Antidegradation Level II Review is NOT Required**

XI. Colorado River Salinity Forum Considerations

Discharges in the Colorado River Basin are required to have their discharge at a TDS loading of less than 1.00 tons/day unless certain exemptions apply. Refer to the Forum's Guidelines for additional information allowing for an exceedence of this value.

XII. Summary Comments

The mathematical modeling and best professional judgement indicate that violations of receiving water beneficial uses with their associated water quality standards, including important downstream segments, will not occur for the evaluated parameters of concern as discussed above if the effluent limitations indicated above are met.

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XIII. Notice of UPDES Requirement

This Addendum to the Statement of Basis does not authorize any entity or party to discharge to the waters of the State of Utah. That authority is granted through a UPDES permit issued by the Utah Division of Water Quality. The numbers presented here may be changed as a function of other factors. Dischargers are strongly urged to contact the Permits Section for further information. Permit writers may utilize other information to adjust these limits and/or to determine other limits based upon best available technology and other considerations provided that the values in this wasteload analysis [TMDL] are not compromised. See special provisions in Utah Water Quality Standards for adjustments in the Total Dissolved Solids values based upon background concentration.

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File Name: Centerfield_WLA_1-4-13

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APPENDIX - Coefficients and Other Model Information

CBOD Coeff. (Kd)20 1/day 2.000	CBOD Coeff. FORCED (Kd)/day 0.000	CBOD Coeff. (Ka)T 1/day 0.875	REAER. Coeff. (Ka)20 (Ka)/day 417.484	REAER. Coeff. FORCED 1/day 0.000	REAER. Coeff. (Ka)T 1/day 272.421	NBOD Coeff. (Kn)20 1/day 0.600	NBOD Coeff. (Kn)T 1/day 0.150
Open Coeff. (K4)20 1/day 0.000	Open Coeff. (K4)T 1/day 0.000	NH3 LOSS (K5)20 1/day 4.000	NH3 (K5)T 1/day 1.750	NO2+NO3 LOSS (K6)20 1/day 0.000	NO2+NO3 (K6)T 1/day 0.000	TRC Decay K(CI)20 1/day 32.000	TRC K(CI)(T) 1/day 11.211
BENTHIC DEMAND (SOD)20 gm/m2/day 1.000	BENTHIC DEMAND (SOD)T gm/m2/day 0.322						
K1 CBOD {theta} 1.0	K2 Reaer. {theta} 1.0	K3 NH3 {theta} 1.1	K4 Open {theta} 1.0	K5 NH3 Loss {theta} 1.0	K6 NO2+3 {theta} 1.0	K(CI) TRC {theta} 1.1	S Benthic {theta} 1.1

Utah Division of Water Quality
Salt Lake City, Utah

Level I Antidegradation Review for: Hexcel

An antidegradation review (ADR) was conducted to determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected. The Level I ADR found that the proposed activity meets the requirements of R317-2-3.5(b)(1) (water quality will not be lowered by the proposed activity) and, therefore does not require a Level II review. The proposed activity is a basic permit renewal. No increase in effluent concentration or load is requested over that allowed under the current UPDES Permit.

	FLOW	PH		TSS		BOD		TDS
	DAILY MAX	DAILY MIN	DAILY MAX	30 DAY AVG	30-DAY AVG	30 DAY AVG	MAX WEEKLY AVG	DAILY MAX
DMR DATE								
	MGD	6.5 SU	9 SU	25 mg/L	35 mg/L	25 mg/L	35 mg/L	1,200 mg/L
1/31/2007	0.115	8.1	8.1	NODI=C	NODI=C	8	8	210
2/28/2007	0.064	7.9	7.9	NODI=C	NODI=C	16	16	510
3/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
4/30/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
5/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
6/30/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
7/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
8/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
9/30/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
10/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
11/30/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
12/31/2007	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
1/31/2008	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
2/29/2008	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
3/31/2008	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C	NODI=C
4/30/2008	0.149	7.59	7.59	NODI=C	NODI=C	17	17	280
5/31/2008	0.149	8.1	8.1	NODI=C	NODI=C	NODI=C	NODI=C	270
6/30/2008	0.218	7.11	7.11	NODI=C	NODI=C	9	9	300
7/31/2008	0.307	7.3	7.3	NODI=C	NODI=C	37	37	250
8/31/2008	0.184	7.13	7.13	NODI=C	NODI=C	25	25	230
9/30/2008	0.213	8.2	8.2	NODI=B	NODI=B	0	17	220
10/31/2008	0.396	8.45	8.45	NODI=B	NODI=B	NODI=9	16	230
11/30/2008	0.218	8.3	8.3	NODI=B	NODI=B	NODI=9	13	230
12/31/2008	0.218	8.3	8.3	NODI=B	NODI=B	0	10	270
1/31/2009	0.307	8.2	8.2	NODI=B	NODI=B	<5	<5	480
2/28/2009	0.184	7.5	7.5	NODI=B	NODI=B	8	8	320
3/31/2009	0.184	8.5	8.5	NODI=B	NODI=B	NODI=B	NODI=B	350
4/30/2009	0.218	8.11	8.11	<20	<20	NODI=B	NODI=B	340
5/31/2009	0.396	7.7	7.7	20	20	110	110	270
6/30/2009	0.218	7.7	7.7	<20	<20	NODI=B	NODI=B	310
7/31/2009	0.184	7.09	7.09	NODI=B	NODI=B	NODI=B	NODI=B	230
8/31/2009	0.047	6.6	6.6	NODI=B	NODI=B	NODI=B	NODI=B	380
9/30/2009	0.086	7	7	NODI=B	NODI=B	11	11	240
10/31/2009	0.086	7.5	7.5	NODI=B	NODI=B	7	7	280
11/30/2009	0.086	7.6	7.6	NODI=C	NODI=C	NODI=C	NODI=C	270
12/31/2009	0.149	7.4	7.4	NODI=B	NODI=B	12	12	370
1/31/2010	0.115	8.3	8.3	NODI=9	NODI=9	NODI=9	NODI=9	250
2/28/2010	0.149	7.9	7.9	NODI=B	NODI=B	NODI=B	NODI=B	230
3/31/2010	0.307	8.1	8.1	NODI=B	NODI=B	NODI=B	NODI=B	250
4/30/2010	0.08	7.7	7.7	NODI=9	NODI=9	NODI=9	NODI=9	260
5/31/2010	0.184	7.7	7.7	0	0	0	0	260
6/30/2010	0.115	7.6	7.6	0	0	0	9	290
7/31/2010	0.396	7.3	7.3	0	0	0	10	290
8/31/2010	0.115	7.5	7.5	0	0	0	0	240
9/30/2010	0.149	7.25	7.25	NODI=9	NODI=9	NODI=9	NODI=9	360
10/31/2010	0.115	7.5	7.5	NODI=9	NODI=9	NODI=9	NODI=9	360
11/30/2010	0.149	8.4	8.4	NODI=9	NODI=9	NODI=9	NODI=9	240
12/31/2010	0.149	7.6	7.6	0	0	0	0	310
1/31/2011	0.396	7.4	7.4	0	0	0	0	330

2/28/2011	0.149	7.3	7.3	NODI=9	NODI=9	0	8	260
3/31/2011	0.218	7.4	7.4	0	0	0	9	250
4/30/2011	0.08	6.9	6.9	0	0	0	19	260
5/31/2011	0.157	7.52	7.52	0	0	0	0	290
6/30/2011	0.0157	7.4	7.4	NODI=B	NODI=B	25	25	250
7/31/2011	0.149	7.1	7.1	NODI=B	NODI=B	NODI=B	NODI=B	260
8/31/2011	0.218	7.8	7.8	NODI=B	NODI=B	NODI=B	NODI=B	220
9/30/2011	0.184	7.18	7.18	NODI=B	NODI=B	NODI=9	17	310
10/31/2011	0.132	7.2	7.2	NODI=9	NODI=B	NODI=9	NODI=B	200
11/30/2011	0.157	7.1	7.1	NODI=B	NODI=B	26	26	290
12/31/2011	0.184	6.6	6.6	NODI=B	NODI=B	12	12	250
1/31/2012	0.15	7.2	7.2	NODI=B	NODI=B	13	13	210
2/29/2012	0.115	6.95	6.95	NODI=B	NODI=B	NODI=B	NODI=B	250
3/31/2012	0.081	6.8	6.8	NODI=B	NODI=B	NODI=B	NODI=B	250
4/30/2012	0.132	7.05	7.05	NODI=B	NODI=B	NODI=B	NODI=B	350
5/31/2012	0.115	7	7	NODI=B	NODI=B	NODI=B	NODI=B	270
6/30/2012	0.184	6.8	6.8	NODI=B	NODI=B	NODI=B	NODI=B	320
7/31/2012	0.115	7	7	NODI=B	NODI=B	6	6	320
8/31/2012	0.15	7.1	7.1	NODI=B	NODI=B	5	5	350
9/30/2012	0.184	8.3	8.3	NODI=B	NODI=B	20	20	450

red indicates effluent limit violation

NODI=B:below method detection limit

NODI=C: no discharge

NODI=9: not monitored

FILE COPY

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Industrial Permit No. **UT0025305**

In compliance with provisions of the *Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended (the "Act")*,

HEXCEL CORPORATION

is hereby authorized to discharge from its wastewater treatment facility to receiving waters named:

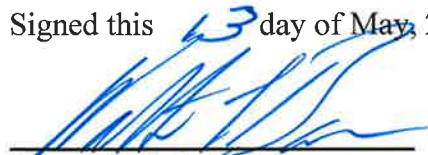
UTAH AND SALT LAKE CANAL

in accordance with specific limitations, outfalls, and other conditions set forth herein.

This permit shall become effective on June 1, 2013

This permit expires at midnight on May 31, 2018.

Signed this 13 day of May, 2013.



Walter L. Baker, P.E.

Director

Utah Division of Water Quality

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

A. Description of Discharge Point.

The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

Outfall Number

001

Location of Discharge Outfall

Located at Latitude 40°39' 17.65" and Longitude 112° 02' 42.85". The discharge is located approximately 5400 South and 6500 West in Salt Lake County, Utah.

B. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Effluent Limitations ^a			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Flow, MGD	0.6	NA	NA	NA
BOD ₅ , mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
Total Dissolved Solids, mg/L	NA	NA	NA	1,200
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable

^a See Definitions, *Part V*, for definition of terms.

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Self-Monitoring and Reporting Requirements ^a			
Parameter	Frequency	Sample Type	Units
Total Flow	Monthly	Instantaneous Measurement	MGD
BOD ₅	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
Total Dissolved Solids	Monthly	Grab	mg/L
pH	Monthly	Grab	SU

^a See Definitions, *Part V*, for definition of terms.

D. Reporting of Wastewater Monitoring Results.

Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), post-marked no later than the 28th day of the month following the completed reporting period. The first report is due on or before July 28, 2013. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VII.G)*, and submitted to the Director, Division of Water Quality and to EPA at the following addresses:

original to: Department of Environmental Quality
 Division of Water Quality
 195 North 1950 West
 PO Box 144870
 Salt Lake City, Utah 84114-4870

II. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

A. Representative Sampling.

Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.

B. Monitoring Procedures.

Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10 and 40CFR Part 503*, unless other test procedures have been specified in this permit.

C. Penalties for Tampering.

The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Compliance Schedules.

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

E. Additional Monitoring by the Permittee.

If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10 and 40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.

F. Records Contents.

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

G. Retention of Records.

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this

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permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location

H. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 536-4300, or 24-hour answering service (801) 536-4123.
2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4123 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any noncompliance which may endanger health or the environment;
 - b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part III.G, Bypass of Treatment Facilities.*);
 - c. Any upset which exceeds any effluent limitation in the permit (See *Part III.H, Upset Conditions.*);
 - d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit; or,
 - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,

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- e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
 - 4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
 - 5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results*.
- I. Other Noncompliance Reporting.
Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part II.H.3*
- J. Inspection and Entry.
The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
- 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;
 - 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
 - 5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply.
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions.
The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions or the Act is subject to a fine not exceeding \$25,000 per day of violation. Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding \$50,000 per day. Except as provided at *Part III.G, Bypass of Treatment Facilities* and *Part III.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense.
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate.
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance.
The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances.
Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent

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any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.
2. Prohibition of Bypass.
 - a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (3) The permittee submitted notices as required under *section III.G.3.*
 - b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *sections III.G.2.a (1), (2) and (3).*
3. Notice.
 - a. *Anticipated bypass.* Except as provided above in *section III.G.2* and below in *section III.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages:

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- (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
 - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
 - (6) Any additional information requested by the Director.
- b. *Emergency Bypass.* Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *section III.G.3.a.(1) through (6)* to the extent practicable.
- c. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part III.H, Twenty Four Hour Reporting*. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

- 1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
- 2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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- a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under *Part II.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
 - d. The permittee complied with any remedial measures required under *Part III.D, Duty to Mitigate*.
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

IV. GENERAL REQUIREMENTS

A. Planned Changes.

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of parameters discharged or pollutant sold or given away. This notification applies to pollutants, which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance.

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.

C. Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.

E. Duty to Provide Information.

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

F. Other Information.

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

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G. Signatory Requirements.

All applications, reports or information submitted to the Director shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Director, and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
3. Changes to authorization. If an authorization under *paragraph III.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph IV.G.2.* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports.

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The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports.

Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.

J. Oil and Hazardous Substance Liability.

Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.

K. Property Rights.

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability.

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, are held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers.

This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;
2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the

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permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

N. State or Federal Laws.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117* and *Section 510* of the *Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.

O. Water Quality - Reopener Provision.

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
3. Revisions to the current CWA § 208 area wide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.

P. Toxicity Limitation - Reopener Provision.

This permit may be reopened and modified (following proper administrative procedures) to include, whole effluent toxicity (WET) limitations, a compliance date, a compliance schedule, a change in the whole effluent toxicity (biomonitoring) protocol, additional or modified numerical limitations, or any other conditions related to the control of toxicants.

Q. Storm Water-Reopener Provision.

At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".

V. DEFINITIONS

A. Wastewater.

1. The "7-day (and weekly) average", other than for e-coli bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for e-coli bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The "30-day (and monthly) average," other than for e-coli bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for e-coli bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. "Act," means the *Utah Water Quality Act*.
4. "Acute toxicity" occurs when 50 percent or more mortality is observed for either test species at any effluent concentration.
5. "Bypass," means the diversion of waste streams from any portion of a treatment facility.
6. "Chronic toxicity" occurs when the survival, growth, or reproduction for either test species exposed to a dilution of 25 percent effluent (or lower) is significantly less (at the 95 percent confidence level) than the survival, growth, or reproduction of the control specimens.
7. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not

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be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

- a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
 - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
 - c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,
 - d. Continuous sample volume, with sample collection rate proportional to flow rate.
8. "CWA," means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
 9. "Daily Maximum" (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
 10. "EPA," means the United States Environmental Protection Agency.
 11. "Director," means Director of the Utah Division of Water Quality.
 12. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.
 13. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
 14. "Severe Property Damage," means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 15. "Upset," means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent

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caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.